UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R36XA012NM

Site Name: Sand Plains

Precipitation or Climate Zone: 9 to 14 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This upland site occurs on plateaus, mesas, upland plains and valley sides. Slopes are gentle to undulating with hummocks and dunes common. Slopes range from 1 to 15 percent but average less than 8 percent. Elevation ranges from 6,400 to 7,200 feet above sea level.

Land Form:

1. Plain
2. Valley side
3.

Aspect:

1. N/A
2.
3.

	Minimum	Maximum
Elevation (feet)	6,400	7,200
Slope (percent)	1	15
Water Table Depth (inches)	N/A	N/A

Flooding:	**Minimum**	**Maximum**
Frequency	N/A	N/A
Duration	N/A	N/A

Ponding:	**Minimum**	**Maximum**
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

Mean annual precipitation varies from 9 to 14 inches. Deviations of 4 inches or more are quite common. Approximately 60 percent of the precipitation is received during the native plant growth period, April through September. During July, August and September 4 to 6 inches of precipitation influence the presence and production of warm-season plants. Fall and spring moisture is conducive to the growth of cool-season herbaceous plants. Maximum shrub growth also occurs during this time. Summer precipitation is characterized by brief, localized thunderstorms. Winter moisture usually occurs as snow or light rain.

Mean annual temperature varies from 64 degrees F in July to 21 degrees F in January. The maximum is near 100 degrees F. The minimum is near 40 degrees F. The average last killing frost in the spring is around mid-May. The first killing frost in the fall is late September or early October. The frost-free period is approximately 120 to 140 days, but freezing temperatures have been recorded for every month except July and August. Temperatures are generally conducive for herbaceous plant growth from April through September.

Wind velocities are relatively light most of the year with stronger winds occurring in spring and early summer. These stronger winds, which may exceed 25 miles per hour, increase transpiration rates of plants and rapidly dry the soil surface. Also, small soil particles are often displaced by the stronger winds, which can result in structural damage to native plants, particularly young seedlings.

Climate data was obtained from the WCCR web site. Using 50% probabilities for freeze-free and frost-free seasons at 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	**Maximum**
Frost-free period (days):	104	119
Freeze-free period (days):	134	145
Mean annual precipitation (inches):	9	14

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.52	1.79	7.6	45.6
February	.43	1.56	10.7	50.4
March	.67	1.92	16.8	56.8
April	.52	1.26	22.7	66.0
May	.62	1.26	28.8	75.5
June	.49	1.21	35.1	85.8
July	1.54	3.41	42.1	88.9
August	1.86	3.72	41.8	85.8
September	1.08	1.86	34,6	78.8
October	1.01	1.86	25.3	68.8
November	.71	1.60	16.2	56.0
December	.56	1.49	9.3	47.0

Climate Stations:

				Period			
Station ID	292241	Location	Cuba, NM	From:	01/01/14	To:	12/31/01
Station ID	293422	Location	Gallup FAA AP, NM	From:	01/01/21	To:	12/31/01

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

The soils on this site are deep and somewhat excessively well drained. Surface textures are loamy sand, loamy fine sand and sandy loam. Subsoils are coarse to moderately coarse textured. Permeability is rapid; water-holding capacity is medium to low and runoff is slow.

Parent Material Kind: Alluvium

Parent Material Origin: Sandstone - unspecified

Surface Texture:

1. Loam sand
2. Loamy fine sand
3. Sandy loam

Surface Texture Modifier:

1. N/A
2.
3.

Subsurface Texture Group: Sandy
Surface Fragments <=3" (% Cover): N/A
Surface Fragments >3" (% Cover): N/A
Subsurface Fragments <=3" (%Volume): N/A
Subsurface Fragments >=3" (%Volume): N/A

	Minimum	**Maximum**
Drainage Class:	Somewhat excessively	Somewhat excessively
Permeability Class:	Rapid	Very rapid
Depth (inches):	60	>72
Electrical Conductivity (mmhos/cm):	N/A	N/A
Sodium Absorption Ratio:	N/A	N/A
Soil Reaction (1:1 Water):	6.6	7.8
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	3	9
Calcium Carbonate Equivalent (percent):	N/A	N/A

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label**: HCPC

Plant Community Narrative: Historic Climax Plant Community
A grass-shrub mixture with scattered juniper and pinyon trees characterizes the plant community on this site. Forbs are most prominent in spring and summer months of adequate soil moisture.

Canopy Cover:	
Trees, shrubs and half-shrubs	17 %
Ground Cover (Aveage Percent of Surface Area).	
Grasses & Forbs	25
Bare ground	55
Surface gravel	0
Surface cobble and stone	0
Litter (percent)	20
Litter (average depth in cm.)	1

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	325	523	722
Forb	50	81	111
Tree/Shrub/Vine	125	201	288
Lichen			
Moss			
Microbiotic Crusts			
Total	500	805	1,110

Plant Community Composition and Group Annual Production: Plant species are grouped by annual production **not** by functional groups.

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	ACHY	Indian Ricegrass	161 – 201	161 – 201
2	SPGI	Giant Dropseed	40 – 81	40 – 81
3	SPCR SPCO4	Sand Dropseed Spike Dropseed	40 – 81	40 – 81
4	ANHA PAVI2 SCSC	Sand Bluestem Switchgrass Little Bluestem	40 – 81	40 – 81
5	PLHA BOGR2	Galleta Blue Grama	40 – 81	40 – 81
6	ELEL5	Bottlebrush Squirreltail	40 – 81	40 – 81
7	HECO26 HENE5	Needleandthread New Mexico Feathergrass	40 – 81	40 – 81
8	SPAI	Alkali Sacaton	40 – 121	40 – 121
9	PASM POFE 2GRAM	Western Wheatgrass Muttongrass Other Grasses	24 – 48	24 – 48

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	ERIOG ABAN CAGU LUAL5 SPHAE 2FORBS	Wildbuckwheat spp. Sand Verbena Mariposa Lily Lupine Globemallow spp. Other Forbs	24 – 40	24 - 40

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
11	ATCA2	Fourwing Saltbush	40 – 81	40 – 81
12	ARFI2 ARTR2	Sand Sagebrush Big Sagebrush	40 – 81	40 – 81
13	EPVI YUCCA	Mormon-tea Yucca spp.	8 – 24	8 – 24
14	ERNAN5 TECA2	Rubber Rabbitbrush Spineless Horsebrush	8 – 24	8 – 24
15	JUMO PIED	Oneseed Juniper Pinyon Pine	40 – 121	40 – 121

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other species that could appear include: sandhill muhly, littleseed ricegrass, broom dales, cholla cactus, Russian thistle, kochia, western ragweed, lambsquarters and threadleaf groundsel.

Plant Growth Curves

Growth Curve ID **0012NM**

Growth Curve Name: **HCPC**

Growth Curve Description: **Mixed grass-shrubland with scattered juniper/pinyon with a minor forb component.**

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

No Data

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	Hydrologic Group
Berent	A
Calendar	?
Cobba	?
Ess	?
Sojo	?
Wellsville	?
Widen	?

Recreational Uses:

This site is suitable for horseback riding, hunting and observation of wildlife.

Wood Products:

Wood products produced on this site include fence and fuelwood. Landscape trees could be a minor product on this site.

Other Products:

Grazing:

Approximately 90 percent of the vegetation produced on this site are suitable for grazing or browsing by domestic livestock and wildlife. Grazing distribution is generally not a problem if adequate waterings are provided. Continuous grazing, which allows repetitive grazing of the most desirable species, leads to a reduced vigor and eventual decrease in these species. Such deterioration is indicated by a decrease in Indian ricegrass, bluestems, needlegrasses, western wheatgrass, muttongrass and fourwing saltbush. Species that increases include dropseeds, galleta, blue grama, sandhill muhly, ring muhly, big sagebrush and rabbitbrush. Oneseed juniper and pinyon may also increase as the herbaceous understory deteriorates. A planned grazing system with periodic deferment is best to maintain the desirable balance between plant species, maintain high productivity and high nutritive value.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	2.5 – 3.4
75 – 51	3.3 – 5.1
50 – 26	5.0 – 10.0
25 – 0	10.0+

Plant Part	Code	Species Preference	Code
Stems	S	None Selected	NS
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruits/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

Plant Preference by Animal Kind:

Animal Kind: Livestock

Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites:

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: **New Mexico**

County: **Rio Arriba, Sandoval, San Juan**

Latitude:

Longitude:

Township:

Range:

Section:

Is the type locality sensitive? **Yes** ☐ **No** ☐

General Legal Description:

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus and Mesas 36 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: McKinley & Sandoval

Characteristic Soils Are:	
Berent, Calendar, Cobba, Ess, Sojo	Wellsville, Widen
Other Soils included are:	

Site Description Approval:

Author	Date	Approval	Date
Don Sylvester		Don Sylvester	

Site Description Revision:

Author	Date	Approval	Date
Elizabeth Wright	08/14/02	George Chavez	09/11/02